Abstract of the Disclosure

In a multi-streaming processor, a system for fetching instructions from individual ones of multiple streams to an instruction pipeline is provided, comprising a fetch algorithm for selecting from which stream to fetch an instruction, and one or more predictors for forecasting whether a load instruction will hit or miss the cache or a branch will be taken. The prediction or predictions are used by the fetch algorithm in determining from which stream to fetch. In some cases probabilities are determined and also used in decisions, and predictors may be used at either or both of fetch and dispatch stages.